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09/680,120	10/04/2000	Sean Lyndersay	13768.170	7801

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EXAMINER

DELGADO, MICHAEL A

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 11/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/680,120

Applicant(s)

LYNDERSAY ET AL.

Examiner

Michael S. A. Delgado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 8-15, 17-18 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,272,492 by Kay.

In claim 1, Kay teaches about a system including a client (Fig 5a, 112) and a server system (Fig 5a, 500, 508, 516), the server system including a front end server “search proxy server (Fig 5a, 502) combine with search engine (Fig 5a, 508)” and one or more back end servers “local web server (Fig 5a, 504) and “other web server (Fig 5a, 116)”, each back end server having private folders and public folders (Col 5, lines 34-55), wherein a client request is received at the front end server (Fig 5b, 551), a method for selecting a particular back end server to service the client request, the method comprising the acts of (Fig 5b):

accessing a directory for configuration information based on a Uniform Resource Identifier “URL” in the client request by the front end server (Col 4, lines 30-40); and
selecting the particular back end server to service the client request by the front end server, wherein the particular back end server is one of (Col 5, lines 34-55):

a first back end server identified from the configuration information if the client request is for a private folder, wherein the first back end server stores the private folder “secured user access” of the client (Col 5, lines 34-55);

a second back end server identified from the configuration information if the client request is for a home public folder, wherein the second back end server identified from the configuration information stores the home public folder associated with the private folder of the client (Col 5, lines 34-55); and

a third back end server selected with a selection module “search engine (Fig 5a, 508)” if the client request is for an application public folder “content from other servers” (Col 6, lines 50-67), wherein the selection module identifies the third back end server for each client request of a particular user (Col 6, lines 50-67).

In claim 2, Kay teaches about method as defined in claim 1, further comprising the act of directing the client request to the particular back end server (Col 4, lines 30-40).

In claim 3, Kay teaches about method as defined in claim 1, further comprising the act of servicing the client request with the particular back end server (Col 1, lines 40-50).

In claim 4, Kay teaches about method as defined in claim 1, wherein the configuration information associates a username with the private folder (Col 5, lines 34-55), and wherein the username is identified from one of the URI of the client request or authentication information of a user (Col 4, lines 30-40).

In claim 5, Kay teaches about method as defined in claim 1, wherein the configuration information associates the home public folder “user group” with the private folder “user”(Col 5, lines 34-55).

In claim 8, Kay teaches about method as defined in claim 1, wherein the back end servers include ghosted folders “files that has no content that is of use to the user but causes a pointer to be generated to access the needed information on other servers” (Col 5, lines 34-55).

In claim 9, Kay teaches about method as defined in claim 8, further comprising the act or returning a subset of servers to the front end server if the particular back end server ghosts “files that has no content that is of use to the user but causes a pointer to be generated to access the needed information on other servers” a content requested in the client request (Col 6, lines 50-67).

In claim 10, Kay teaches about method as defined in claim 9, wherein the selection module selects a new back end server from the subset of servers to service the client request (Col 6, lines 50-67).

In claim 11, Kay teaches about method as defined in claim 10, wherein the one or more back end servers included in the subset of servers actually store the content requested in the client request (Col 6, line 65-Col 7, line 10)

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In claim 12, Kay teaches about method as defined in claim 10, further comprising the act of directing the client request to the new back end server (Col 6, lines 50-67).

In claim 13, Kay teaches about method as defined in claim 1, wherein the first back end server is the same as the second back end server (Fig 5a, 400), (Col 5, lines 34-55).

In claim 14, Kay teaches about a computer readable medium having computer executable instructions for performing the acts recited in claim 1 (Col 1, lines 40-50).

In claim 15, Kay teaches about a system including a client (Fig 5a, 112) and a server system including a front end server and one or more back end servers (Fig 5a, 500, 508, 516), a method for directing a client request to a particular back end server (Fig 5b), the particular back end server included in the one or more back end servers (Fig 5a, 504, 516), the method comprising the acts of:

identifying the particular back end server from a directory if the client request is for a private folder (Col 5, lines 34-55), (Col 4, lines 30-40), wherein only the particular back end server stores the private folder “secured user access” of the client (Col 5, lines 34-55);

identifying the particular back end server from the directory if the client request is for a home public folder “group of users” (Col 5, lines 34-55), wherein only the particular back end server stores the home public folder of the client (Col 4, lines 30-40);

identifying the particular back end server from a selection module “search engine” (Fig 5a, 508) if the particular back end server cannot be identified from the directory, wherein the

selection module identifies the same particular back end server for each client request of a particular user (Col 6, lines 50-67); and

directing the client request to the particular back end server (Col 6, lines 50-67).

In claim 17, Kay teaches about method as defined in claim 15, wherein the act of identifying the particular back end server from a directory if the client request is for a private folder further comprises the act of examining the URI "URL" to determine a username (Col 4, lines 30-40).

In claim 18, Kay teaches about method as defined in claim 15 wherein the act of identifying the particular back end server from the directory if the client request is for a home public folder further comprises the act of identifying a string "URL" in the directory to determine that the client request is for a home public folder "group of users on content" (Fig 4a, 408) (Col 5, lines 25-55) (Col 4, lines 30-40).

In claim 28, Kay teaches about a system including a client (Fig 5a, 112) and a server system (Fig 5a, 500, 508, 516), the server system including a front end server and one or more back end servers (Fig 5a, 504, 516), a computer program product for implementing a method for directing a client request to a particular back end server (Fig 5b), the computer program product comprising:

a computer-readable medium carrying executable instructions for performing the method, wherein the method includes the acts of:

identifying the particular back end server from a directory if the client request is for a private folder, wherein only one of the one or more back end servers stores the private folder “secured user access” of the client (Col 5, lines 34-55);

identifying the particular back end server from the directory if the client request is for a home public folder “group of user”, wherein only one of the one or more back end servers stores the home public folder of the client (Col 5, lines 34-55);

identifying the particular back end server from a selection module “search engine” (Fig 5a, 508) if the particular back end server cannot be identified from the directory (Col 6, lines 50-67), wherein the selection module identifies the same particular back end server for each client request of a particular user (Col 6, lines 50-67); and

directing the client request to the particular back end server (Col 6, lines 50-67).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 6-7, 16, 19-27 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,272,492 by Kay in view of US Patent No. 6,339,423 by Sampson et al.
5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
 1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

In claim 6, Kay teaches all the limitation but does not explicitly teach about method as defined in claim 1, wherein the selection module further comprises a hash function, wherein a list of the one or more back end servers is hashed with a security token of a user to select the particular back end server.

The process of using a hash and a security token to select a server is well known in the art. Sampson teaches about a multi-domain access control in which a hash and a security token are used to access different domains (Col 8, lines 15-30). It would have been obvious to some one of ordinary skill at the time of the invention to use a hash and security token to insure that only authorized users are allowed to access secured information.

Security is important in a wide are network that host a large number of users. To prevent unauthorized access to data that are considered classified, it is important to identify authorized user, which is accomplished by issuing security tokens that are used with a hash to determine user's legitimacy.

In claim 7, Kay and Sampson combine to teach about method as defined in claim 6, wherein one or more of the back end servers included in the list of the one or more back end servers is marked as unavailable, wherein the hash function does not exclude a back end servers that is marked as unavailable unless the particular back end server selected by the hash function is marked as unavailable (Col 1, lines 15-35).

In claim 16, Kay and Sampson combine to teach about method as defined in claim 15 wherein the directory associates a URI "URL" (Col 4, lines 30-40) of the client request with the private folder (Col 5, lines 34-55), associates the private folder with the home public folder "group of users", and but does not explicitly teach about associating each of the one or more back end servers that have a replica of the home public folder.

The concept of creating replica of information and associating them is well known in the art as disclosed by Sampson. Sampson teaches about replicating data for the purpose of efficiency and failure handling (Col 9, lines 30-40). It would have been obvious at the time of the invention for some one of ordinary skill to replicate data in order to recover from a backend server failure.

By replicating data, this insures that there is always a backup server whenever one of the servers fails. In the financial world it is important to recover under these circumstances. By replicating information, the advantage of load balancing is realized as resources can be used most efficiently.

In claim 19, Kay teaches all the limitation but does not explicitly teach about method as defined in claim 18 wherein the string is “public folder” . Kay teaches about using a topical analyzer to analyze a string that is used to access a server (Col 6, lines 50-67). Any string including “public folder” can be mapped to an IP address by linking the two entities in a mapping table. The notation of using a recognizable string instead of an IP address is user friendly and easy to work with. This is the approach that is used in implemented a DNS as illustrated at (Col 4, lines 30-40).

In claim 20, Kay and Sampson combine to teach about method as defined in claim 15, wherein the selection module performs a hash function using a list of the one or more back end servers and a security token of a user to select the particular back end server (Covered in claim 6).

In claim 21, Kay and Sampson combine to teach about a system including a client (Fig 5a, 112) and a server system including a front end server “search proxy server (Fig 5a, 502) combine with search engine (Fig 5a, 508)” and one or more back end servers “local web server (Fig 5a, 504) and “other web server (Fig 5a, 116)”, a method for directing a client request for content in an application public folder to a particular back end server(Fig 5b), the method comprising the acts of:

identifying a security token of a user associated with the client request (Covered in claim 6);

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identifying a list of back end servers from a directory, wherein each back end server in the list of back end servers has a replica of the application public folder (Covered in claim 16);

selecting the particular back end server from the list using a selection module “search engine (Fig 5a, 508)”, wherein the selection module hashes the security token of the user and the list of back end servers (Covered in claim 6); and

directing the client request to the particular back end server selected by the selection module(Col 6, lines 50-67).

In claim 22, Kay and Sampson combine to teach about method as defined in claim 21, wherein the particular back end server selected by the selection module ghosts the content requested in the client request (Col 6, lines 50-67).

In claim 23, Kay and Sampson combine to teach about method as defined in claim 22, further comprising the acts of:

the particular back end server sending a subset list of back end servers to the front-end server (Col 6, lines 50-67), wherein the subset list includes each of the one or more back end servers that actually stores the content (Col 6, lines 50-67);

selecting a new back end server from the subset list with the selection module(Col 6, lines 50-67); and

directing the client request to the new back end server (Col 6, lines 50-67).

In claim 24, Kay and Sampson combine to teach about a method as defined in claim 21, wherein the particular back end server is unavailable (Col 1, lines 15-35) see claim 16 where replica is used to recover from failure.

In claim 25, Kay and Sampson combine to teach about method as defined in claim 24 further comprising the acts of:

marking the particular server as unavailable in the list of back end servers (Col 1, lines 15-35).;

selecting a new particular server from the list of back end servers with the selection module "search engine (Fig 5a, 508)", wherein the unavailable back end server is not excluded from the list of back end servers unless the unavailable back end server is selected by the to selection module (Col 1, lines 15-35); and

directing the client request to the new particular server (Col 6, lines 50-67).

In claim 26, Kay and Sampson combine to teach about method as defined in claim 21, wherein at least one of the back end servers included in the list of back end servers is marked as unavailable and wherein the act of selecting the particular back end server comprises the act of keeping the marked back end servers in the list of back end servers when the selection module selects the particular back end server (Col 1, lines 15-35).

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In claim 27, Kay and Sampson combine to teach about computer readable medium containing computer executable instructions for executing the acts recited in claim 21 (Covered in claim 21).

In claim 29, Kay and Sampson combine to teach about computer program product as defined in claim 28, wherein the directory associates a URI "URL" of the client request with the private folder (Col 5, lines 34-55), (Col 4, lines 30-40), associates the private folder with the home public folder (Fig 4a) (Col 4, lines 30-40), and associates each of the one or more back end servers that have a replica of the home public folder (Covered in claim 16).

In claim 30, Kay and Sampson combine to teach about computer program product as defined in claim 29, wherein the act of identifying the particular back end server from a directory if the client request is for a private folder "secured user access" further comprises the act of examining the URI "URL" to determine a username (Col 4, lines 30-40), (Col 5, lines 34-55).

In claim 31, Kay and Sampson combine to teach about computer program product as defined in claim 29, wherein the act of identifying the particular back end server from the directory if the client request is for a home public folder further comprises the act of identifying a string "URL" in the directory to determine that the client request is for a home public folder (Col 4, lines 30-40).

In claim 32, Kay and Sampson combine to teach about computer program product as defined in claim 29, wherein the string is "public folder" (Covered in claim 19).

In claim 33, Kay and Sampson combine to teach about computer program product as defined in claim 29, wherein the selection module performs a hash function using a list of the one or more back end servers and a security token of a user to select the particular back end server (Covered in claim 6).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 6,101,495 by Tshida et al, teaches about a method of executing partition operations in a parallel database system.

US Patent No. 6,101,495 by Stakutis et al, teaches about a methods and apparatus for high-speed access to and sharing of storage devices on a networked digital data processing system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael S. A. Delgado whose telephone number is 703-305-8057. The examiner can normally be reached on 8 AM - 4.30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (703)308-5221. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.


MD


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